

EXPANDED NATURAL RESOURCES INTERIM COMMITTEE

MEETING - May 6, 2004

**9:30 a.m. to 4:00 p.m. Boise City Hall, City Council Chambers,
3rd Floor, 150 N. Capitol Blvd., Boise, Idaho**

The meeting was called to order by Cochairman Representative Dell Raybould at 9:35 a.m. Committee members present included Cochairman Senator Laird Noh, Senator Stanley Williams, Senator Don Burtenshaw, Senator Dean Cameron, Senator Joe Stegner, Senator Skip Brandt, Representative Bert Stevenson, Representative JoAn Wood, Representative Jack Barraclough, Representative Scott Bedke, Representative Mike Moyle and Representative George Eskridge. President Pro Tem Senator Bob Geddes and Senator Clint Stennett were absent and excused. Adhoc members present were Senator John Andreason, Senator Brent Hill, Senator Tom Gannon, Senator Shawn Keough, Senator Bert Marley, Representative Maxine Bell, Representative Wayne Meyer, Representative Darrell Bolz, Representative Peter Nielsen, Representative Tim Ridinger, Representative Doug Jones, Representative Lawrence Denney and Representative Larry Bradford. Senator Gary Schroeder and Representative Wendy Jaquet were absent and excused. Non-committee member legislators included Speaker Bruce Newcomb; Representative David Langhorst and Representative Frances Field.

Others present were Lynn Carlquist, Jeff Martin and Mike Faulkner, North Snake Ground Water District; Thorleif Rangen and J. Dee May, Rangen, Inc.; Terry Scanlan and Jason Kreizenbeck, Micron Technology; Jerry Rigby, Upper Valley Water Users; Commissioner John Keys, Ken Pedde, Mike Relf, Rich Rigby, Diana Cross, Jerrold Gregg, Regional Director Bill McDonald, Karl Wirkus, Ed Schmidt and Allyn Meuleman, U.S. Bureau of Reclamation; Craig Evans, Bingham Groundwater District; Jim Kempton, Judi Danielson and Joann Hunt, Northwest Power and Conservation Council; John Simpson, Clear Springs; Rich Hahn, John Prescott, and Jim Tucker Idaho Power; Brent Olmstead, Milk Producers of Idaho; Peter Richardson, Industrial Customers of Idaho Power; Bob Naerebout, Idaho Dairyman's Association; Lynn Tominaga, Tim Deeg and Brenda Tominaga, Idaho Ground Water Appropriators; Richard Slaughter, CIG, University of Washington; Neil Colwell, Avista Corp.; Butch Baird, Boise City; Suzanne Schaefer, SBS Associates; James Yost, Office of the Governor; Carl Bianchi, Mike Nugent, Caralee Lambert, Maureen Ingram and Ray Houston, Legislative Services Office; Maria Minicucci, Boise Parks and Rec.; Dan Steenson, Ringert and Clark; Bill

Thompson, Minidoka Irrigation District; Rick Keller, Dennis Tanikuni, Tom Geary, Terry Jones and Frank Priestly, Idaho Farm Bureau; Pat Sullivan and Andrea Mihm, Sullivan and Reberger; Kathleen Carr, Department of the Interior Boise Field Solicitor's Office; Cheryl Miller, Miller and Associates; Dick Rush, Idaho Association of Commerce and Industry; Donna Cosgrow and Gary Johnson, University of Idaho; Dean Stevenson, Magic Valley Ground Water District; Director Karl Dreher, David Blew, Dave Tuthill, Phil Rassier, Helen Harrington, Lewis Rounds, Ron Carlson, Hal Anderson, Thomas Grant and Brian Patton, Idaho Department of Water Resources; Stan Clark; Barry Burnell, Idaho Department of Environmental Quality; Randy MacMillan, Clear Springs Foods; Steve Purvis, Boise City; James Carkulli, Exergy; Ted Whiteman, Jerome Cheese Co.; Randy Bingham, Burley Irrigation District; Skip Smyser, Connolly and Smyser, Ctd.; Catherine Chertudi, Boise Public Works; David Bennion, CH2M Hill; Layne Bangerter, Senator Crapo's Office; Pat McCoy, Capital Press; Roger Madsen and Jay Engstrom, Idaho Department of Commerce and Labor; Scott Yates, Trout Unlimited; Bert Bowler, Bill Sedivy, Tom Stuart and Matt Yost, Idaho Rivers United; John Rosholt, Committee of Nine, Twin Falls Canal Company and North Snake Canal Company; Albert Lockwood, Committee of Nine and North Snake Canal Company; Garth Newton; Gayle Batt and Norm Semanko, Idaho Water Users Association; Larry Schlicht, Division of Financial Management; Ken Burgess, Senator Craig's Office; Charles Barnes, Congressman Simpson's Office; Lloyd Knight, Idaho Cattle Assn.; Chuck Brockway, Brockway Engineering; Kathy Peter, U.S. Geological Survey; Dan Herrig, U.S. Fish and Wildlife Service; Todd VanOrden, Bingham Groundwater District; Gregory Kasto, Idaho Trout Co.; Linda Lemmon, Thousand Springs Water Users Assn.; Dan McFaddan, LSRARD; Tim Corder, City of Mountain Home; Dale Rockwood, Committee of Nine; Charles Coiner, Twin Falls Canal Company and Committee of Nine; Roger Ling, A & B Irrigation District, Burley Irrigation District, Falls Irrigation District and Aberdeen-Springfield Canal Company; Bruce Wright, Basic American Foods and Larry Cope, Clear Springs Foods. Staff members present were Katharine Gerrity, Toni Hobbs and Charmi Arregui.

After opening remarks, Cochairman Representative Raybould commented that each of the working groups that were formed at the last meeting had met to outline objectives and the work that each area needs to do to move forward. The main focus of these meetings was recharge and how to bring the aquifers back into good health.

Representative Stevenson moved that the minutes of the April 9, 2004, meeting be approved as written. The motion was seconded by **Representative Bedke** and the minutes were approved unanimously.

Mr. Dave Blew, Idaho Department of Water Resources, was introduced to report to the committee regarding current recharge efforts.

Mr. Blew stated that there are several recharge proposals across the state. The Rathdrum Prairie Aquifer proposal would involve the diversion of water from the Spokane River. Recharge would be looked at as temporary storage for the purpose of

increasing stream flows downstream.

The Moscow/Pullman area proposal would involve increasing recharge along the margin of the basin or through surface sediments and also proposes the introduction of water directly from land surface into the lower aquifer using injection wells.

Recharge has also been considered in the Bear River Basin. In its 1996 update of the feasibility study for the potential Caribou Dam and Reservoir Project, the Idaho Water Resource Board considered using stored water for recharge or delivering it to ground water pumpers within the Bancroft-Lund Ground Water Management Area to offset their use of ground water.

In Mountain Home there have been some small scale tests performed. A reliable source of water needs to be identified to make recharge feasible.

Recharge in the Eastern Snake Plain Aquifer has been studied for over 40 years. Several recharge sites are operational but more are needed. There are a number of institutional and funding constraints that are hampering the development of other recharge sites.

Mr. Blew noted that there are four primary issues relating to the implementation of any recharge project:

- ! Identifying how much water is available
- ! Organizational structure and funding
- ! Recharge site development
- ! Recharge site operation

He continued by addressing these issues as they relate to each specific area. In terms of water availability:

In the Eastern Snake Plain Aquifer questions include:

- ! How does recharge relate to other uses below Milner Dam specifically hydropower production?
- ! How much natural flow is available to fill the Idaho Water Resources Board's water right?
- ! How much stored water can be used for recharge?
- ! What are the impacts (positive or negative) on salmon augmentation flows? (**Mr. Blew** commented that in his opinion, if spring discharge and base flow to the Snake River can be increased, the impact would be positive.)

- ! In light of the Palisades agreement that requires canal systems to basically shut down during the winter, can water be run outside of the irrigation season?

In the Bear River Basin water is available but it will require construction of the Caribou Dam or other upstream storage.

In Mountain Home, an adequate supply of water needs to be located.

The Rathdrum Prairie would divert flows from the Spokane River for infiltration into the aquifer. There are currently no water rights in the Rathdrum Prairie and that issue will have to be addressed.

The Moscow/Pullman area needs to identify adequate sources of water.

Organizational structure and funding is one of the key items necessary in order to implement managed recharge. Some type of appropriate organizational structure is needed to support recharge activities, provide day-to-day operations, accept liability for recharge site operations and hold water rights and easements. This organizational structure is very important in order to make recharge work.

Suggestions for potential organizational structures include:

- ! Idaho Water Resource Board
- ! Counties (would require changes in law)
- ! Recharge Districts
- ! Water Districts (would require changes in law)
- ! Other entities created through state law

According the **Mr. Blew**, funding is another component of the organizational structure. In order to develop some type of long term funding, the following questions need to be asked:

- ! Who will fund managed recharge?
- ! How will that funding be generated?
- ! How will funds be administered?
- ! Who will benefit from recharge activities?

The cost of recharge in the Eastern Snake Plain Aquifer for Magic Valley alone would be in excess of \$1.5 million annually. This amount does not include any personnel costs, it is just the cost to get water to the recharge sites.

In the Bear River Basin, even after applying hydropower revenues from Caribou Dam, the annualized cost to build and operate Caribou Dam and Reservoir would be about \$23 per acre foot (indexed up from the 1996 report). In this case, it might make more

sense to deliver the water to the end user rather than recharge and pay to pump it back out of the ground.

Mr. Blew then moved on to address recharge site development. According to **Mr. Blew**, one of the first things that needs to be done is to evaluate the economics of recharge versus the delivery of the water to its intended use. In some cases it may be cheaper to simply treat the surface water and send it on to the end user rather than to recharge it.

There are, however, situations where recharge is necessary to treat the water before it can be used. This is the case with aquaculture, industrial uses and for some municipalities.

Recharge site development also involves identifying potential sites and securing access to those sites. Many potential recharge sites in Idaho are located on land that is administered by the Bureau of Land Management and securing access to those sites involves many issues.

In the Rathdrum Prairie, increasing urbanization and development in the valley may eliminate many of the potential recharge sites.

Another factor to consider is whether there are appropriate delivery mechanisms in place. It does not make sense to develop recharge sites without securing delivery contracts with irrigation districts or canal companies to ensure that water can be delivered to the sites.

Mr. Blew noted that secure funding for recharge site development and operation is also important. Idaho has recharge sites that will cost close to \$1 million dollars to develop and funding needs to be in place in order to proceed with these projects. There are recharge projects currently that would benefit from engineering design analysis that would cost about \$35,000 to \$40,000 to make sure the sites are worthy of development before spending \$1/2 million to develop them. Sites that are developed also need to have sufficient capacity to meet the recharge objectives that have been set.

Mr. Blew went on to discuss monitoring. He said that appropriate monitoring plans need to be developed to ensure the protection of ground water and would include both the monitoring of recharge water and ground water.

The Department of Environmental Quality is developing approved monitoring plans that will be in place before recharge operations begin. Some entity has to accept liability for the operation of the sites. Part of that responsibility lies in monitoring. The Idaho Department of Water Resources has been working with the Department of Environmental Quality for several years and are hoping to have some resolution about what types of monitoring will need to be done.

According to **Mr. Blew**, recharge site operation will also involve some fish and wildlife issues that need to be addressed up front.

In conclusion, **Mr. Blew** stated that recharge is not impossible but it will require a systematic approach. The state needs to think of implementing a recharge program in each basin and not individual projects. Recharge will require coordination with local, state and federal authorities and nongovernmental organizations.

Mr. Blew's power point presentation is available at <http://www.idwr.state.id.us/Committee/default.htm>.

Senator Cameron asked if there is a potential total figure available as to the cost of developing, monitoring and maintaining the recharge sites that have been identified. He also asked what the cost would be to provide water to those sites. **Mr. Blew** stated that for 300,000 acre feet of recharge on the Eastern Snake Plain the cost would be about \$1.6 million annually. This does not include any personnel costs. Recharge site development is going to depend on site characteristics such as proximity to canals. The feasibility study does go through cost estimates on a number of recharge sites and most of those are higher than what **Mr. Blew** thinks it would actually cost. He said he could not even estimate the costs involved in solving the conflicts that exist with Idaho Power.

Senator Noh asked how other states are dealing with the issue of recharge. **Mr. Blew** said that a lot of headway is being made in other states but the big difference is a matter of scale. Arizona and California both have a tremendous amount of recharge going on. In Idaho, however, the Eastern Snake Plain alone would be significantly larger than what is being carried out in these other states.

Senator Burtenshaw stated that the information given shows several studies have been done in the Eastern Snake Plain area. He asked if these studies looked at the entire Eastern Snake Plain Aquifer or just concentrated in one area. **Mr. Blew** answered that most of the recharge for the Eastern Snake Plain would be concentrated in the Magic Valley area. The feasibility study involves what is called the Thousand Springs scenario which is considered to potentially provide the most "bang for the buck" in terms of trying to increase or maintain spring flow. Recharge could move to the Upper Snake Plain eventually.

Representative Bedke asked if the water was available, what obstacles still exist between the state and the federal government. **Mr. Blew** stated that access to those prime recharge sites that are located on BLM ground will require an environmental assessment (EA) or an easement or right-of-way to the site. An EA for a potential land exchange with the state is another possibility. Due to the Palisades agreement with the Bureau of Reclamation, the state would have to obtain permission to run water in the canals outside of the irrigation season in order to have the canal capacity necessary to get an adequate supply of water to the recharge sites. There may also be the question

of the use of stored water. **Representative Bedke** asked if the EAs have been started. **Mr. Blew** said that the Idaho Department of Water Resources has secured a right-of-way to the Milepost 31 recharge site and now it is a matter of identifying some entity to take responsibility for that right-of-way. This would involve taking on the responsibilities stated within the EA. This EA found no significant impact and the Idaho Department of Water Resources believes that most of the recharge sites that have been identified can be done in a similar manner. Nothing else has been started partially due to the fact that an organizational structure is not in place to support recharge and there is no secure funding in place to pay for the EAs.

Mr. Terry Scanlan, Micron Technology, was the next speaker. **Mr. Scanlan** stated that Micron utilizes water for its memory component manufacturing process. The company uses water to rinse the silicon wafers. They require the water to be a constant temperature within plus or minus 1 degree fahrenheit. The water also has to be ultra pure. Their water is treated down to less than 5 parts per billion.

Micron's primary water source is a deep aquifer and they use approximately 2,700 acre feet annually. They also use United Water for potable and emergency back up use. Since 1999, the Boise River is used for recharge, irrigation and industrial use. The total water use is comparable to that of a 1,000 acre farm. The water that is recycled by Micron Technology increases their supply by about double.

In the early 1990s, there was a spike in water use in the Southeast Boise area by Micron, United Water and for irrigation that led to significant water level declines. In 1994, a ground water management area was declared that curtailed additional ground water development in that area without mitigation. From 1997 on, water levels have been relatively stable.

In 1994, due to the ground water curtailment, Micron was forced to look at options available in order to maintain their water supply. These options included:

- ! relocating facilities outside of Boise
- ! increasing wastewater recycling rate
- ! relocating existing diversions outside of the ground water management area
- ! treating Boise River water for quality and temperature
- ! recharge through the Boise River

According to **Mr. Scanlan**, Micron opted for the final option and they developed an aquifer recharge and recovery plan. This is somewhat different than much of the recharge activity because Micron was interested in recovering the water for its own use. The technique has been used successfully in many areas. It involves storing water underground when the supply exists and recovering it from wells when supply is short.

Mr. Scanlan noted that Micron's long-term goals include stabilization of ground water

supplies and maintaining or improving the existing ground water quality.

In terms of Micron's water rights, the company annexed a pipeline to the Nampa/Meridian irrigation district in order to obtain natural flow surface water rights. They transferred water from irrigation use to industrial and recharge use. They also obtained 3,000 acre feet in Anderson Ranch from the Bureau of Reclamation. To make that work, J.R. Simplot and Micron traded 6,000 acre feet of Lucky Peak storage for the 3,000 acre feet of storage in Anderson Ranch. Lucky Peak was designated as irrigation water that could not be utilized for recharge. Micron also has a water right permit for flood control releases in the Boise River.

Mr. Scanlan noted that Micron also has the ability to recover the water under a new water right permit with a mitigation plan. The mitigation plan allows recovery of 100% of the water during the first year and recovery of the carry over water with a 10% storage loss. Since this began in 1998, about 9,850 acre feet has been delivered to the southeast Boise area to replace existing ground water uses. The recharge project demonstration phase began in 2001. Currently about 450 gallons per minute are being recharged. The system is designed to recharge approximately 3,000 gallons per minute. **Mr. Scanlan** added that Micron's recharge project is one model but the committee needs to keep in mind that the company is treating recharge water for their specific goals related to water quality. Treatment may or may not work for other areas.

Mr. Scanlan stated that the aquifer condition in southeast Boise is not typical of most areas in the Treasure Valley. Water levels are generally not declining in most areas.

Representative Stevenson asked what the level of the ground water is at the site and also what size of injection well is being used. **Mr. Scanlan** said the ground water level is about 450 feet below the Micron plant. The injection well is a 40 inch casing with 16 inch springs.

Representative Raybould asked how Micron developed the formula of 10% loss of storage per year after the first year. He commented that the agreement was very unique. **Mr. Scanlan** answered that Micron prepared a model of the aquifer with a wide variety of recovery scenarios and through that process came up with an estimate of loss. That number can be adjusted but 10% is the agreement currently in place with the Idaho Department of Water Resources that was approved in 1999.

Mr. Jeff Martin, North Snake Ground Water District, was the next speaker. He explained that the North Snake Ground Water District does not actively do aquifer recharge per se and has not developed any recharge sites. The district has provided water for the last two years to a site that was developed by the North Side Canal Company with assistance from the Idaho Department of Water Resources. That recharge site is located east of Jerome in the Hunt area and it is believed that this site influences the springs in the Blue Lakes/City of Twin Falls water supply area. In the last

two years, they have been able to run between 5 and 7 cfs during the season of operation of the North Side Canal Company. The ground water district purchased rented water to put in that site for that same time period.

The North Snake Ground Water District has put a lot of work into trying to reduce its dependance on ground water in the area close to the springs. They have also been able to take advantage of some flood control sites. These sites are traditionally sites that the North Side Canal Company used to dump water when there was excess surface water in the canal system.

Mr. Martin distributed a map showing the flood control sites as well as ground water irrigation rights. The map included ground water acres that were converted back to a surface water supply in 2002 or 2003 and totaled about 4,300 acres at the end of 2003 of the 98,000 or so that are irrigated in the North Snake Ground Water District. In 2004, an additional 4,700 acres have been converted back to a surface water supply.

Mr. Martin noted that these conversion projects contribute to the health of the aquifer in a number of ways. The most obvious contribution is that the ground water is no longer diverted. Putting additional water into the north side system does put additional burdens on the canals during power outages or large amounts of rain in the area. The flood control sites, as set forth on the map, are where water is diverted when excess water exists. During the last few years in an effort to try to help out the springs, water has been put in those sites. It does appear that some of the sites have some immediate impact on the Curren Tunnel that provides water to the Rangen trout hatchery.

Senator Burtenshaw asked if, when the ground water district discharges water into those areas, they account for the amount of water being put in to get credit for that water. **Mr. Martin** answered that the canal company keeps records and that water is subtracted from an account the ground water district has with the canal company for water that is rented. **Representative Stevenson** asked whether there is any record of the amount of water that is lost to evaporation. **Mr. Martin** said that they are not assessed for any evaporative loss and no records are kept for that as far as he is aware. **Representative Stevenson** asked whether at some point that will have to be accounted for in order to know the effects of the recharge that is being done. **Mr. Martin** did not think so. In his opinion most of the evaporation happens at the application stage during irrigation in addition to reservoir loss. Due to this fact, evaporation does not have a dramatic effect on the volume of water for recharge.

Representative Bedke asked whether the flood control sites that show immediate impact on the ground water affected the water quality. **Mr. Martin** stated that the hatcheries did not report any noticeable decrease in their water quality. The amount of water put into the two sites was about 10 cfs total and the response from the Curren Tunnel itself was considerably smaller than that. The water changed the slope of the curve but the magnitude of the increase was fairly small compared to the amount of

water put in.

Mr. Martin, in response to a question from **Senator Noh** said that the ditch riders on the north side system calculate what is actually delivered and the additional transmission loss is also calculated. The ground water district is given a monthly report so they can keep track of how much rented water has been used for that year. **Senator Noh** asked whether any of the wells that are not being pumped could be turned on for delivery to aquaculture facilities. **Mr. Martin** said that the wells he is talking about are still in service. Using one of these wells to deliver ground water over the rim to an aquaculture facility would probably not be economically feasible. The volume of water necessary to operate an aquaculture facility is much more than the average irrigation diversion.

Mr. Dan McFadden, Lower Snake River Aquifer Recharge District (LSRARD), gave the committee a brief history of the district. **Mr. McFadden** stated that the LSARD is an organization of irrigators and fish farmers primarily in the Hagerman Valley and a narrow strip of land above the canyon rim. LSRARD has approximately 135 members including spring water users and ground water pumpers. This district was formed because of frustrated attempts to protest deep well drilling on the west end of the aquifer in the late 1960s and 1970s and the resulting decline in spring flows. Formation of the LSRARD was seen as a measure to augment incidental recharges and to stem the decline of spring flows. The district was formed in 1981 and members are water right holders with flow rates of 1 cfs or more within the District boundaries.

According to **Mr. McFadden**, LSRARD held 1980 priority water rights for 1200 cfs on the Snake River from the Milner pool and 800 cfs from the Big and Little Wood Rivers. District patrons attained the water rights in 1980 and transferred the rights to the district in 1981 after its formation. These same rights were assigned by the LSRARD to the State Water Board in 1999 to avoid forfeiture since so many obstacles were encountered in developing the rights including state and federal administrative issues, environmental issues, and drought. The water rights were subordinated to hydro power at Idaho Power's insistence. A long-term agreement was reached with BLM in 1984 for the Shoshone site on the Milner-Gooding Canal. A short-term (two-year) agreement with the Bureau of Reclamation (BOR) was obtained in 1984 for use of the Milner-Gooding Canal for experimental and demonstration purposes.

Mr. McFadden noted that no recharge was done between 1984 and 1994 due to drought. LSRARD was never able to obtain more than a year-by-year agreement with the BOR to run recharge water since the expiration of the initial two-year agreement. In 1996 and 1997, the BUREAU OF RECLAMATION mandated compliance with the National Environmental Policy Act (NEPA) and the Warren contract before further water could be run through federal facilities (Milner-Gooding Canal). Due to constraints and drought, recharge has only been accomplished in 8 of the 22 years of LSRARD's existence. The grand total of recharge accomplished by the District is about 200,000

acre feet. LSRARD has developed the Shoshone site on the Milner-Gooding Canal and the Carey site on the Little Wood River.

Mr. McFadden said that the district collects approximately \$30,000 for each assessment based on \$10 per cfs cost. The district has spent approximately \$150,000 on structures, wheeling water, monitoring costs and insurance. Income has limited tasks which the district can accomplish such as environmental assessments and hiring staff. It is very difficult to do all that is required in a recharge program with voluntary help.

Mr. McFadden stated that public education is another key to an effective managed recharge program. The LSRARD has a pamphlet available as well as a video for distribution.

Commissioner John Keys, U.S. Bureau of Reclamation, was introduced as the next speaker. He informed the committee that there are challenges involving water supply all over the western United States and the Bureau is not sure recharge is the answer to sustain spring flows and ground water levels in the Magic Valley. Over the years, Reclamation participated in a number of studies with the Idaho Department of Water Resources that go back to the early 1970s. At that time there was an analog ground water model of the Snake Plain Aquifer and predictions were being made regarding levels associated with the withdrawals for projects. These studies went all the way up to 1994 when money was put into response functions. These studies resulted in the 1999 report on large scale management recharge.

In spite of those misgivings, **Commissioner Keys** emphasized that the Bureau is not predisposed against recharge. Recharge can be part of a good water management system for a basin. He added that the Bureau will work with the state to help make decisions on how to address the problem with management of the total water resource in the Snake River Basin. **Commissioner Keys** informed the committee that his comments today would focus on the Eastern Snake Plain Aquifer but he would be willing to return to talk about the other aquifers in the state if necessary.

Commissioner Keys noted that the Bureau has a long history of working with the state to resolve water resource problems. During the last decade, the Bureau has spent more than \$1 million on cooperative studies with the State of Idaho. Unfortunately, there is no way to make water and there has to be a way to make due with what mother nature supplies. There are no easy solutions to this issue. He said that while the Bureau of Reclamation is ready to assist Idaho in resolving its problems in the Eastern Snake Plain Aquifer, they feel that the state must take the lead in addressing the problems and administer the water rights in accordance with its water right system. **Commissioner Keys** set forth a few principles that guide the Bureau of Reclamation:

- ! Reclamation will respect state water law and will expect that Idaho will honor the senior water rights held by Reclamation and others.

Section 8 of the 1902 Reclamation Act requires that the Bureau obtain a water right before building a project and then operate that project within that water right.

- ! Reclamation will operate its projects in accordance with congressional authorizations.

Every Reclamation project in each and every state has been authorized by Congress and comes with a number of different project purposes that have to be honored.

- ! Reclamation will protect its ability to meet its obligation to its contractors by providing the water for irrigation that the contracts call for. Reclamation will also provide water for the Endangered Species Act that must be met to be able to deliver that water.

The 427,000 acre feet of water that the Bureau has been trying to provide under the biological opinion since 1991 has kept irrigators in business for 13 years.

Commissioner Keys said he is firmly convinced that had that water not been provided in the years possible, some irrigators would have been shut down similar to what happened in Klamath Falls in 2001.

- ! Reclamation must live within its budget.

The constraints on Reclamation's budget are not likely to change anytime soon. Since **Commissioner Keys** went into office in 2001, the Bureau has had a flat or decreasing budget. Currently they are testifying on the 2005 budget and are putting together the 2006 budget.

- ! New contract authorizations and contract amendments will require compliance with NEPA and the ESA.

The Bureau is willing to work with the state but working with the Federal Government has limitations. NEPA and the ESA are part of those limitations.

- ! Reclamation must be able to meet its full augmentation requirements.

The ground water pumping and mitigation for ground water pumping must not diminish, to any degree, Reclamation's ability to provide water for flow augmentation. In years when Reclamation is unable to meet its commitment to provide the 427,000 acre feet, no water could be provided to mitigate for ground water pumping from Reclamation facilities. He reminded the committee that for the last three years the 427,000 acre feet requirement has not been met. The biological opinion stated that the 427,000 acre feet requirement would be met in 80% of the years. This is an important point for the

committee to remember.

The problem is that there is a finite water supply with more demands than the system can supply. This is happening in a number of western states. Colorado has had to cut off 700 wells in northeast Colorado. Kansas is in the process of cutting off hundreds of wells in the basin because of the lack of ground water.

Commissioner Keys commented that recharge in the Eastern Snake Plain would reduce the drain on the aquifer to some degree and could be part of an overall management program. He added, however, that recharge cannot be done without impact. The resource is finite. Moving the supply from one pocket to another simply shifts the impact, it does not solve the underlying problem. It is a fact that surface irrigation has greatly enhanced the aquifer. Now, taking water from the surface system for recharge is considered by many to be the answer. Sacrificing the surface system to solve ground water problems will not solve the ground water problem. It will make the surface system less reliable. We must not forget that the most important recharge tool in existence is the surface irrigation system. There have been many instances that show how that surface system can be used for recharge.

Commissioner Keys added that there is some thought that conservation by surface water is a major cause of the current problem and that surface users could fix the problem. In these times of drought one must remember that the Idaho water users have benefitted immensely from the storage created by the Bureau of Reclamation and that the surface water system is the backbone of the agricultural economy in the State of Idaho.

The May 1 forecast is at about 62% of normal for the Snake River Basin and it appears that Palisades and Jackson are only about 50% of capacity and there is not a lot of runoff left.

It is true that total diversions by surface water users are about 1 million acre feet, lower today than 30 years ago. Some of those reductions have occurred due to conversions from surface water to ground water. Other reductions have been caused by canals and laterals being lined to prevent seepage. Idaho surface irrigators were much better off during the last three drought years because of the conservation practices that have been implemented.

Commissioner Keys, then addressed the four recharge proposals for the Eastern Snake Plain Aquifer System that were identified and generally discussed in the 1999 feasibility report of the Idaho Department of Water Resources in cooperation with the U.S. Bureau of Reclamation. (A copy of the report entitled "Feasibility of Large-Scale Managed Recharge of the Eastern Snake Plain Aquifer System" is on file with the Legislative Services Office.)

Commissioner Keys commented on Graph “A” as attached hereto. He noted that the graph sets forth certain project places where ground water recharge could be done. The facility that could deliver the water to the project is identified in the graph as the “recharge canal.” The graph also shows which projects are private and which are associated with the federal government.

Commissioner Keys then commented on Graph “B” as attached hereto. Graph “B” shows the times during the year when recharge could potentially be done in the noted facilities, if water was available. In each area, January, February and March would be good months for recharge.

Commissioner Keys then addressed Graph “C” as attached hereto. Graph “C” shows costs. The costs differ from cost information provided by Mr. Blew because they represent the total potential costs.

In response to a question from **Senator Stegner**, **Commissioner Keys** stated that in his opinion the number of acre feet listed in this chart is unattainable. Also, if that water were available, he does not believe it could be done for \$7.9 million, it would be higher. **Senator Cameron** asked whether the graph depicts operating costs only, i.e., not capital outlay, site preparation or the purchase of the water. **Commissioner Keys** said the information includes an assumed cost of water at \$3.00 an acre foot so the estimate is low. The price of water today is \$10.50 an acre foot. The costs depicted in the graph also do not include capital facilities.

In considering whether Reclamation laws and contracts impact the recharge proposals, **Commissioner Keys** stated that one of the key questions is whether surface water or project water can be used. Another question would be whether project facilities can be used. If nonproject water is being used, it would be the diversion of natural flows rather than surface water. Some of those diversions, since they would be using new junior water rights, would be made outside of the irrigation season. These would be junior to the storage rights for the Reclamation projects in Eastern Idaho.

Such diversions are currently governed by the winter water savings provisions of the Palisades project. This is one of the more serious hurdles to the use of natural flows. One canal identified in the 1999 recharge report that is subject to this provision is the North Side Canal. This is one of two canals identified with the Thousand Springs Recharge proposal. The winter water savings provisions do not apply to the Milner-Gooding Canal. However, under the 1954 amendatory contract, if American Falls District #2 takes water during the winter water savings period, and American Falls does not spill, that water comes from their allocation of water from American Falls. All of the canals associated with the Hells Half Acre Recharge site are subject to the winter water savings provisions. The two canals associated with Egin Lakes recharge site do not come under that curtailment provision.

Commissioner Keys explained that winter water savings provisions were deemed essential to the success of the Palisades project when it was built. Congress made construction work on the Dam contingent upon the water users organizations in Idaho agreeing to that curtailment of diversions. The provisions were memorialized and repayment contracts associated with American Falls, Jackson and Palisades contained that provision. Finally, these contracts were confirmed in Idaho judicial decrees. These decrees specified that the winter water savings provisions required that some 45 canals in Eastern Idaho curtail diversions for 150 consecutive days during a 181 day period from November 1 to April 30. If surface water is being looked at as being able to provide recharge water, winter water savings provisions play a big role in this. The diversions foregone by the contractors are storage in Reclamation reservoirs.

Commissioner Keys next reviewed how the state could comply with winter water saving. The canals subject to the contractual provision could divert for the 31 days between November 1 and March 31. Diversions for recharge would have to use a canal not belonging to any of those entities that agreed to the winter water savings provision diversions. **Commissioner Keys** also noted that contracts can be changed. He said the Reclamation would entertain requests to modify the winter water savings provisions. Issues would include, but are not limited to the following:

- ❗ Contract amendments would require that Reclamation storage rights be senior to all recharge and that the storage of the contemplated 143,000 acre feet of foregone historic water diversions continue to occur.

In other words, there could not be damage to the storage for the project.

- ❗ Reclamation would have to comply with NEPA and with the ESA and Congress may have to approve any changes.

The congressional intent, when the project was built, was to require elimination of winter diversions in order for that water to be stored in the projects.

- ❗ The parties involved would have to decide how to handle the judicial decrees that were part of the initial process.

The use of excess canal capacity would also need to be addressed in considering the use of nonproject water for recharge. The use of excess canal capacity, at this time, requires a contract with the Bureau of Reclamation and in most cases Warren Act contracts also apply. The Warren Act is very difficult to follow and in **Commissioner Key's** opinion there are easier ways to do this. The easier way, according to **Commissioner Keys**, would be to accelerate the title transfer for the Milner-Gooding Canal. This process is already underway and there is an agreement with the American Falls Reservoir District #2 that identifies the specific facilities to be transferred, the mechanism for transfer and any conditions. This transfer does have to meet NEPA and

the ESA compliance. The Bureau is working with the congressional delegation to draft legislation authorizing the transfer of those facilities as necessary. Reclamation strongly supports this title transfer and would work to make it happen.

If the title to Milner-Gooding Canal is not transferred, the Warren Act contract would be necessary. Some issues involved in this procedure include:

! This procedure can only be used to convey nonproject water for irrigation.

In the past, this requirement has made it impossible to use federal facilities for recharge. **Commissioner Keys** noted that the question would be whether the recharge contemplated is statutorily authorized since it mitigates for irrigation and other uses.

In talking about project water, as a matter of state law, Reclamation has no say over the use of natural flows for recharge as long as its senior water rights are not impacted. The use of stored water invokes considerations of Reclamation's authorities and obligations under federal law. At a minimum, Reclamation would need to analyze and approve the use of project water for recharge. It would also have to meet NEPA and the ESA. In the worst case, it might be determined that project authorizations do not cover the use of water for managed recharge or that the service area of the Minidoka and Palisades project is limited to areas that do not either include the area where ground water pumping occurs that creates the need to mitigate or to the area benefitted by the recharge water.

According to **Commissioner Keys**, another practical issue that is critically important relates to the general availability of water for recharge regardless of whether the supply comes from project or nonproject sources. **Commissioner Keys** explained that there are strong ties between runoff and storage of water. In years when there is very little storage in the system, even with medium runoff, there is not water available for recharge. Water for recharge is only available when there is medium storage and medium runoff occurs. He stated that in the last two years, Idaho could not have recharged any water at all. The projection for 2005 at the very best would be that water might be available.

Representative Raybould asked what would happen if a space holder allocates his water to the rental pool and then the state or an entity rents that water from the rental pool under a priority in the rental pool rules that would allow for it, could that water be used for recharge. **Commissioner Keys** answered that there would be a number of obstacles that would have to be overcome before that could happen. He continued that if federal water is being used, compliance with NEPA and the ESA has to be met. This is in order to be sure that supply of water did not keep the Bureau from supplying the ESA water required to keep the project afloat. It could not jump in front of that requirement.

Representative Bedke asked for more specifics on how the state can take the lead regarding recharge. **Commissioner Keys** said that the Bureau does not hold federal reserved water rights in this basin. The only water rights they hold are state water rights. The federal government filed for water rights for those projects just like any other private citizen would file for a water right. This means the Bureau lives and dies with the state water right system. The United States Constitution is based on the premise of states being in charge of the water within their boundaries and so the Bureau feels that the state needs to be in the lead in solving the water problems that exist.

Commissioner Keys added that it was the State of Idaho that issued the water permits that caused the problems to begin with.

Senator Noh asked if the state was able to meet the 427,000 acre feet on a sufficiently reliable basis, would there be room to use some of that additional water for recharge.

Commissioner Keys said that was true. He continued that the Bureau wants to work with the state. There are federal facilities that can be used to everyone's advantage when there is water available for recharge. He continued that the old Warren Act is a cumbersome process and the Bureau is working behind the scenes to make it easier to use. They are also looking at other acts that might be available. Unfortunately, they are still federal facilities that require certain conditions be met.

Representative Stevenson asked how the state is to take the lead in this issue when the NEPA and ESA seem to ultimately control everything the state wants to do.

Commissioner Keys said that as far as a project goes, the ESA, at this time, is just as important to the development of that project as the earth used to build the project itself. Unfortunately, in Idaho these projects were built before the ESA was passed and now it is very difficult to meet those requirements. The waters of the Snake River had been allocated to capacity before the ESA and now must try to meet its requirements.

Commissioner Keys stated that the Klamath Falls project was one of the most difficult projects he has ever worked on. It was very difficult because in 2001 there was not enough water available to meet the ESA requirements and the needs of irrigators. Water was not delivered to irrigators that year. The federal law had to be met as part of the federal obligation to the project itself. In **Commissioner Keys** opinion, the systems in the Snake River can be operated, ESA requirements can be met, and irrigation water can be provided. He is not sure that water can be taken from the system for recharge. The Bureau is willing to work with the state to see if that can be done without affecting the irrigation or the ability to meet the ESA requirements.

Regional Director Bill McDonald, Idaho Bureau of Reclamation, spoke to the committee regarding the Minidoka Dam. He explained that regardless whether the Dam is eventually raised, it is going to have to be rehabilitated first. The Dam facility consists of an earth and rockfill Dam, a long pier-and-stoplog spillway, two powerhouses and two canal headworks.

Regional Director McDonald stated that the spillway is in poor condition. There has

been significant concrete deterioration in the bottom piece of the concrete structure. It appears that there is general deterioration in the structural integrity of the concrete. This has led to excessive operation and maintenance costs of about \$300,000 per year just to keep the spillway operating. This issues also raises concerns about personnel safety in the sense that employees are required to do a lot of hands on maintenance during bad weather conditions. There is also a risk, if there was ever a failure, of loss of life downstream.

According to **Director McDonald**, to avoid an ice buildup on the structure that it cannot handle, the reservoir is lowered by five feet during the winter months.

Director McDonald moved on to address rehabilitation options. Those options are:

! Structural Alternatives

- ! Butress existing spillway. This would take the existing basic structure and improve things to ensure the structural integrity of that structure
- ! New spillway immediately downstream. This would involving putting an entirely new spillway in place a few miles downstream from the existing structure.

! Flow Control Alternatives

- ! Additional radial gates
- ! Inflatable rubber dams

Director McDonald explained that the potential rehabilitation costs listed below do not take into account inflation and are very generalized ranges. In other words, since a project like this is several years down the road, the costs below will get higher.

The potential costs are estimated to be \$15 to \$20 million just for the construction contract alone. This is for the contract to a construction firm for the work to be done in the field. There are also additional sources of costs that have not been estimated. These include:

- ! Design & investigations
- ! Permitting and environmental compliance
- ! Determination of repayment contracts
- ! Construction management

The estimated total cost for the entire project is going to be about \$25 to \$35 million.

Under current Reclamation law this is viewed as operation and maintenance and the

cost would have to be borne by Minidoka and Burley districts.

Director McDonald noted that the potential Dam raise is a concept that arose during rehabilitation discussions and had the potential to address rehabilitation and additional storage. The upper limit for the raise of about five feet is based on a cursory initial view. Each foot would gain about 11,000 acre feet of additional storage.

Director McDonald went on to note that, in order to move forward with raising the Dam, the following structural considerations need to be considered.

- ! Raising earth & rockfill dam
- ! Replacing canal headworks
- ! Raising and extending south dike
- ! Modifying/replacing powerplant features
- ! Protecting or relocating switchyard

Director McDonald commented that no investigation has been done regarding foundation conditions. The Bureau is assuming that the foundation would sustain a five foot raise. This is a critical assumption that will have to be checked as the project progresses. He added that the non-structural considerations listed below have also not yet been reviewed:

- ! Non-Structural Considerations
 - ! Property impacts - this includes the potential for property acquisitions to allow for a higher reservoir
 - ! ESA and other environmental considerations
 - ! Recreation impacts - there are recreational facilities and parking lots that would end up under water with a five foot raise.
 - ! Historic/cultural sites
 - ! New water rights - there is the assumption at this point that the water that would be stored with a five foot raise (about 55,000 acre feet) would be available under a junior water right.
 - ! Allocation of costs among existing & new beneficiaries
 - ! Some benefits may be mutually exclusive

Director McDonald informed the committee that, at this point, the Bureau has completed a very cursory concept study. Approaches that seem applicable to the work that has been done so far have been incorporated in the spillway rehabilitation study. The Bureau limited itself to looking only at the field costs for the construction contracts.

Options considered were a one foot raise and a five foot raise, nothing in between was studied.

The estimated cost of a one foot raise is between \$30 and \$40 million and about \$50 million for a five foot raise. **Director McDonald** said that the total cost for this project will be much higher due to the fact that no estimate of the planning process, the final design and engineering, developing specifications or environmental issues has been made. He estimated the total cost for a five foot raise would be around \$100 million.

Director McDonald stated that, in order to move forward, an appraisal study must be completed. This will give a much better handle on the cost estimates. Non-structural features would also be reviewed. To proceed with an appraisal analysis, under federal law, an identified project sponsor, who formally steps up and says they are prepared to be a cooperating agency with the Bureau, is necessary. It is the Bureau's policy to seek appropriate cost share for appraisal level studies.

Director McDonald continued that, after an appraisal level study is completed, a feasibility level study must be done to see if the project is economically justified and financially, environmentally and engineeringly feasible. Such a study requires congressional authorization and cost sharing is again a matter of policy. The Bureau is dependent on congressional appropriation for funding. A feasibility study will be subject to federal principles and guidelines that will require an economic benefit, cost analysis study. In the planning process, NEPA and ESA issues must be addressed. This leads to a formal planning report with requisite findings. This report has to clear the President's Office of Management and Budget.

According to **Director McDonald**, the final step is the actual authorization of the project which requires an Act of Congress and, again, cost sharing is a matter of policy. Only after cost sharing and congressional appropriations are in hand does the project move to final design engineering and an award of the contracts.

Senator Cameron asked if the construction cost estimates for raising the Dam are in addition to the cost of rehabilitation. **Director McDonald** said that the costs are separate.

Representative Bell asked whether the storage of more water is in the Bureau of Reclamation's plan due to the drought in the Western United States. **Director McDonald** stated that the federal process is very convoluted. There is probably an appropriate place for storage, but the Bureau's emphasis is on getting better use out of existing supplies. This is where the future lies in dealing with a lot of the problems the West is facing.

Director McDonald noted that there are problems that exist regarding the rehabilitation and raising of the Dam. They include:

- ! Timing of the decision. It is Reclamation's view that the deterioration of the concrete structure of the spillway is very significant and cannot be put off. It will need to be addressed before the raising study can be completed.
- ! There will have to be a two-track process in order to be ready, not later than the end of the decade, to implement a rehabilitation option if a Dam raise should not be pursued or be found not to be feasible.
- ! Being on separate tracks will cause duplication of effort to some extent - this will involve some lost effort and lost cost.
- ! The worst possible outcome would be that, from a safety perspective, the rehabilitation becomes necessary before the decision regarding raising the Dam has been made. This would mean spending millions of dollars on rehabilitation that in a few years would be put under new concrete for a Dam raise.

In response to a question from **Representative Raybould**, **Commissioner Keys** stated that the ESA only applies to discretionary actions of a federal agency. **Representative Raybould** then asked why federal law would preclude a space holder from renting his water in compliance with state law for recharge if state law allows for water in a rental pool (after other priorities are satisfied), given the fact that the Bureau of Reclamation is subject to state law. **Commissioner Keys** said the law does not prevent a space holder from putting water in the rental pool. After the water is in the pool, it is still federal water and the federal requirements for use of that water still apply. ESA and NEPA requirements still have to be met. Every acre foot of water released must meet those requirements whether it is for irrigation, the rental pool, or for release downstream. The water could be used for recharge but it still has to meet the federal requirements.

Representative Raybould commented that it seems to him the Bureau is determining space holder contracts to be the same as water supply contracts. He continued that this is a different situation because with space holder contracts, once the water in the reservoir is released it becomes the property of the space holder, not the federal government. **Commissioner Keys** emphasized that space holder contracts for space in a federal facility and the water that collects there is federal water. When that water is released for irrigation, it is meeting a federal obligation to that space holder for the delivery of that water. He agreed that a space holder can assign the water after it is released into the water bank but the water bank itself, its operation, and the water from it, is still federal water and has to meet the requirements.

Representative Cuddy asked how much of the 55,000 acre feet of water that would be added by raising the Dam, the National Marine Fisheries Services (NMFS) is going to make a call on. **Commissioner Keys** said studies have not been done to see how much additional water will be available or what the impact of that water will be. He added that when raising the Minidoka Dam project gets under way there will many other species and facts that will have to be taken into account than just the release of water for salmon. This will depend on the identity of the project sponsor and the way in which

the water is allocated. It will be a federal project and will be subject to the ESA.

Commissioner Keys stated that NMFS does not have a call on any specific facility in the basin. The biological opinion is for operations in the Upper Snake River Basin that requires the release of the 427,000 acre feet.

Commissioner. Keys commented that before the power plant was built at Minidoka, many people said nothing else would ever be built in the basin again. The Bureau disagreed and the power plant was built onto Minidoka Dam. In doing so, it met the National Environmental Policy Act, the Endangered Species Act and the Clean Water Act and they built a very good facility. In his opinion, Minidoka Dam could be raised while meeting these acts. The challenge is to be sure it is feasible and then to find the money to do it right.

Senator Williams asked if the 427,000 acre feet was released down the river, could that water then be diverted for recharge, as long as it is put back in the river, to increase spring flows further downstream to meet ESA requirements. **Commissioner Keys** answered that the Bureau looked, at one time, at how that would work. When that was looked at, a shaping agreement existed with Idaho Power Company and the return schedule that brought the water back from recharge did not put the water in the river at the right time. Since that happened, the Bureau no longer has a shaping agreement with Idaho Power. He said that the big problem with doing something like that is that it would dribble the water back and not give the flow augmentation flows that are needed at the right time of the year.

Senator Cameron asked about the plan sponsor. He asked whether the sponsor would be the Minidoka and Burley Irrigation Districts or the State of Idaho and also why a sponsor would come forward before the fiscal impacts are known. **Commissioner Keys** responded that the Bureau does not build facilities without being asked by a group that guarantees to support the project. **Senator Cameron** asked if the State of Idaho decided to be the plan sponsor, is there anything that can be done to speed up the process of raising the Dam. **Commissioner Keys** said that adding on to Minidoka Dam is not a short term solution. No matter who the sponsor is, it will take the Bureau several years to look at the facility to see what it takes to get the project completed. If the State of Idaho offered sponsorship of the project today, in his opinion, all parties could go to Congress to seek authorization for the project. It would be a 50-50 cost share with the Bureau and the state for the price of doing a study. He added that the sooner this can be done, the better. **Representative Raybould** asked if the state were to sponsor the project, could the state become a participator and money be appropriated by Congress with a 20 or 30 year payout. **Commissioner Keys** said that was correct and before construction began an agreement would be signed regarding repayment. Currently, the Bureau is doing 40 year payback contracts.

Representative Nielsen asked whether rehabilitation and raising the Dam can be done at the same time. **Commissioner Keys** answered that the rehabilitation has to be done

regardless of anything else. If the effort to raise the Dam gets sidetracked, that would leave a facility that might not be safe to operate. The sooner movement on the raise gets in motion, the less duplicated effort will be involved. There will be duplicated costs but at first it is just the study and design costs for rehabilitation.

Senator Burtenshaw asked whether it would be feasible to rebuild the Teton Dam. **Commissioner Keys** said that during the last year Senator McClure was in office, that question was studied. At that time, the cost to build an earth structure had gone from the \$77 million that the original facility cost, up to about \$300 million. At that time the Bureau did not think the psyche of that valley could handle an earth structure. The cost of a concrete structure was over \$400 million. Unfortunately, in 1995, the benefits the Dam would bring had not changed. At the time the Dam was originally built the benefit-to-cost ratio was about one-to-one. At the time of the study, the benefits were the same, and the Bureau even added in some benefit for fish, and that would leave you with a project that would have a benefit-to-cost ratio of about .25 rather than one-to-one. Even today, it is doubtful that the benefits of such a Dam would reach \$400 million.

Mr. John Prescott, Idaho Power Company, was the next speaker. On behalf of the company, he thanked the committee for the opportunity to address them and to share the company's views and concerns regarding water issues. He noted that everyone in the state benefits from a healthy aquifer. The company appreciates that this interim committee is tackling the very difficult and complex problem that has been around for many years.

Mr. Prescott stated that the following points represent Idaho Power's view regarding the Eastern Snake Plain Aquifer recharge program:

- ! Idaho Power is very supportive of a healthy aquifer.
- ! The company sees this as a state issue that needs state resolution so that the solution provides the certainty everyone needs regarding the issue.
- ! Idaho Power believes in the prior appropriation doctrine, which it believes is fundamental to a solution.
- ! If a recharge proposal impacts Idaho Power's water rights, the company must actively defend those rights. The reason for this stems back almost 20 years ago when the Swan Falls agreement was signed. At that time, the company was sued by a group of customers for not defending its water rights.
- ! Since the Swan Falls Agreement was signed in 1984, Idaho Power has actually participated and contributed over ½ million dollars to study the management and develop models for the conjunctive management of the river and the aquifer.

Senator Cameron asked whether Idaho Power would stand in opposition to any efforts to recharge the aquifer. **Mr. Prescott** stated that Idaho Power is not against recharge but they must protect their water rights. **Senator Cameron** asked whether that would be the case if recharge was to deliver water in a later time frame than anticipated while

still giving the company access to its water rights. **Mr. Prescott** responded that he would have to know the specifics of that timing. Any time of the year when flows are reduced, the company is impacted. **Senator Cameron** commented that if a solution is not found in delivering appropriate amounts of water to Hagerman and other regions that are impacted, many Idaho Power customers will no longer need to purchase the amounts of power they are currently. **Mr. Prescott** said the company is aware of that fact and that is why it is supportive of a program which would appropriately restore the aquifer.

Representative Raybould stated that in the Swan Falls Agreement, Idaho Power subordinated their water rights upstream to a certain amount of future development on the Snake River, including the requirement of certain flows at the Murphy Gage. He asked whether Idaho Power has the rights in excess of those flows at the Murphy Gage. **Mr. Prescott** said the company does have water rights for projects that date back to the early 1900s. Those rights were subordinated in the Swan Falls agreement to the existing beneficial uses of water. He stated that at the time the Swan Falls agreement was signed, recharge was not considered a beneficial use of water. **Representative Raybould** asked whether Idaho Power would be willing to work with the Eastern Snake Plain Aquifer working group to resolve any problems between Idaho Power and the state so that if water becomes available for recharge, it could be used. **Mr. Prescott** said the company would do that.

Representative Barraclough noted that available data shows water used for recharge will return to the river and asked, given that fact, what Idaho Power's objection is. **Mr. Prescott** said it is an issue of timing, whether if all of the recharge water will return to the river and when it will return. **Representative Barraclough** asked if Idaho Power believes a recharge area could be designed to control the time the water would return. **Mr. Prescott** said that Idaho Power would be very interested in participating in any studies of this type.

In response to a question from **Senator Noh**, **Mr. Prescott** stated that the newspaper article in today's Idaho Statesman and the Twin Falls paper was not intended to indicate an unwillingness on Idaho Power's part to participate in recharge.

The committee then received progress reports from the various working groups. **Helen Harrington, Idaho Department of Water Resources**, and a technical consultant for the Bear River Working Group, spoke first.

The Bear River meeting was held on April 27, 2004. There were about 100 people in attendance and the agenda included many speakers presenting background information relating to the hydrologic conditions, the environment, ground water and surface water and current conditions which are about 30% of normal in the basin. Director Dreher of the Idaho Department of Water Resources made a presentation discussing the issues in the basin and a number of other presentations were made by industry and

municipalities discussing the economic impact of water use in the basin.

The Eastern Snake Plain Aquifer working group met on April 22, 2004. **Senator Noh** stated that the meeting focused primarily on recharge of the Eastern Snake Plain Aquifer. The following reports and conclusions were presented by technical resource people, state agency personnel, signatories of the settlement agreement, working group committee members, and industry representatives:

1. Recharge of the aquifer is not the “silver bullet” needed to solve the problem of receding aquifer levels and spring discharge.
 - There is not enough available water, considering average annual flows past Milner, to restore the aquifer to pre-1970 flows.
 - Water withdrawals for all purposes exceed our ability to recharge.
2. The Eastern Snake Plain Aquifer has three zones of impact that must be addressed separately to effect short term responses to the spring flows. For long term solutions, the aquifer must be considered and managed as one unit. Agreement must be reached on an acceptable aquifer level. It is unlikely to be possible to restore the level to that which prevailed in the 1950's.
3. Critical areas of short term need that should be addressed by the full committee, include:
 - Water availability.
 - Conversion from wells to surface water irrigation in critical areas for short and long term benefit to spring users.
 - Sites for recharge.
 - Funding (State? Private? Large scale assessments?)
4. Need for cooperation of Idaho Power.
5. Need for cooperation of Federal agencies.
6. Need to complete the Eastern Snake Plain Aquifer working model and check for accuracy.
7. Appoint the appropriate agency to manage recharge.
8. Develop long term strategy for recharge with sites that can accommodate large amounts of water in years of high flows.
9. Domestic, municipal, and commercial use must be actively represented and included in solutions.

Senator Noh also noted that legislative members of the working group were asked to comment on their impressions of the meeting and the needs that the full Interim Committee should address. Those comments are set forth in the written report of the working group dated April 22, 2004, and maintained in the records of the Legislative Services Office.

Representative Raybould commented that the presentations at the meeting indicated the extreme difficulty the state is facing in getting recharge into the aquifer in any

significant amount. It was also made quite clear that the cost of recharge will require development of a sufficient funding source.

Another issue that was brought to the forefront was the impact of residential development on the aquifer. The drilling of domestic wells into the aquifer for residential landscaping uses has had a large impact on the aquifer because residential users use water sooner than farmers to water their lawns and they also use it later into the fall.

Representative Stevenson gave the report on the Mountain Home Working Group. The meeting was held April 27, and the members spent three hours in the morning with Jim Blanksma and Tim Corder from the Mountain Home Groundwater Advisory Committee, touring the area and seeing sights that have been used in the past to do some recharge. The gravel pits will take water in rapidly, but there has never been enough water on a consistent basis to do much recharging.

Tim Corder presented an overview of the advisory committee's work to date. This committee includes representatives from numerous stakeholders, including the city of Mountain Home, Mountain Home Air Force Base, domestic and rural water users, and agricultural users. Recognizing that each stakeholder group is a unique and separate entity, the advisory committee asked stakeholders to establish entity plans identifying problems and potential solutions. While some entity plans have been developed, no draft plan has been accepted or approved by this advisory committee.

Gary Spackman, Idaho Department of Water Resources, briefly reviewed the hydrology of the Mountain Home aquifer. The ground water flow is estimated to generally flow from northeast to southwest. Steady aquifer declines have been recorded in the area for approximately 35 years. The Idaho Department of Water Resources designated the area around Cinder Cone Butte as a critical ground water area in 1981. A larger ground water management area that was designated in 1982, includes the city of Mountain Home, and surrounds the critical ground water area. These designations were based upon rapid agricultural development, declining ground water levels, the projection of future declines, and the number of pending applications for further appropriation of water. While there are anomalies, the Department is particularly concerned that aquifer levels appear to continue a steady decline with no indication of recovery in some areas despite reduced pumping and other interventions.

A water budget for the basin estimates an annual water supply of 42,700 acre/feet, annual usage of 73,600 acre/feet and an annual water deficit of approximately 30,900 acre/feet.

Major concerns and expectations are economic viability and continued growth, as for example, the economic contribution by the Mountain Home Air Force Base, and the need for availability of sufficient water to successfully meet the Base's mission. Agriculture makes a significant contribution to the tax base. Forced curtailment could impact an estimated 15,000 acres or one-half of the ground water irrigated acres. All

stakeholders and interested parties must remain at the table. Domestic water users are part of the solution. Domestic water rights and use must be identified and accounted for.

Potential options for Mountain Home were addressed. Recharge was identified as the most viable option. There has been no water available since the Initial Water Level Testing for the Mountain Home Ground Water Advisory Committee 1999 Recharge Project was developed. Stakeholders suggested that the Department has the expertise to identify water available for recharge along with the resources to implement projects. More recharge projects need to be in place so they can be used when water is available. Other options being implemented or considered include: conservation, wastewater applications, conversions, pumping water from the Snake River for recharge, buying out farmers and other exchanges and transfers within Idaho state law.

A copy of the Mountain Home Aquifer Working Group report for April, 2004, is maintained in the records of the Legislative Services Office.

Representative Wayne Meyer gave the report for the North Idaho Working Group. This group met on April 21, 2004. Hal Anderson, Administrator, Technical and Planning Division, Idaho Department of Water Resources, presented a brief background of the water administration issues that led to the current situation.

Mr. Anderson presented an overview of the Spokane Valley-Rathdrum Prairie Aquifer Hydrologic Project. This project is a joint effort among the states of Idaho, Washington and the United States Geological Survey. The project is in the initial stages of getting underway.

Helen Harrington, Hydrogeologist, Idaho Department of Water Resources, gave a brief summary of the Rathdrum Prairie Ground Water Management Area and the current work by the advisory committee appointed by Director Dreher, Idaho Department of Water Resources.

The committee discussed its mission and what it should be working toward. The committee agreed that any legislation that comes about should be evaluated to determine how it will affect North Idaho. The committee requested that maps of the aquifers be prepared for the committee. Color maps will be prepared for committee members by Idaho Department of Water Resources for the next meeting.

Representative Meyer suggested that the committee hear from a number of other agencies and groups at future meetings and discussed other groups that may be affected by the current water issues.

A copy of the North Idaho Working Group report regarding its meeting of April 21, 2004 is maintained in the records of the Legislative Services Office.

In response to a question from **Senator Noh**, **Representative Meyer** said that there is

an aquifer study group that has been formed in North Idaho. It includes representatives from the State of Washington as well as Idaho. There has been a memorandum of agreement signed giving the group \$3.5 million for a study of the Rathdrum Prairie Aquifer from the federal government. The group received \$500,000 this year, Washington contributed \$100,000 and Idaho is going to match that with in-kind services and, if necessary, Idaho would also provide matching funds.

Representative Moyle reported for the Treasure Valley Working Group. This meeting was held on April 20, 2004. The Idaho Department of Water Resources presented an overview of the aquifer system. The basic hydrology of the system was discussed and impacts on ground water levels, including population growth and changing land use, were noted. The Group also discussed water quality issues affecting the aquifer, such as contaminants and nitrates. Flood plains were also a topic of discussion.

Idaho Department of Water Resources presented additional information regarding:

- 1) Additional storage requirements;
- 2) Endangered Species Act concerns;
- 3) Water transfers resulting from land use changes;
- 4) Consumptive use change issues (i.e. urbanization); and
- 5) Well construction standards.

Committee members and others in attendance at the meeting stated that other issues, including the urban use of water, the preservation of surface water rights, and additions to existing storage, should be reviewed by the Group in future meetings.

A copy of the Treasure Valley Aquifer Working Group report of its April 20, 2004, meeting is on file in the Legislative Services Office.

Representative Moyle said that the Treasure Valley area currently has enough water for its needs. Southeast Boise is an area of concern and south of Lake Lowell is another problem area. This group learned that 95% of the recharge within the Treasure Valley Aquifer comes from irrigation water and a lot of flood irrigation is still done in the area. This is what is keeping the aquifer in good shape. There are some concerns in the urban areas. Another concern is land use change as agricultural land becomes residential with lawns and landscaping. This will have an effect in the future and will be discussed at their next meeting.

Senator Cameron asked Ray Houston from the Legislative Budget and Policy office to work with Dave Blew from the Idaho Department of Water Resources to put some numbers together to come up with the potential cost of recharge including the operating costs, the cost of water and capital costs. In order for the state to make an appropriate determination, the state needs to know what the fiscal impact of recharge will be.

Senator Cameron agreed with the comments made earlier that Idaho should look at what other states are doing to solve the problem. He also said that the state needs to investigate the powers, duties and authority of the recharge districts to see if that would be a viable option.

Senator Cameron suggested that the state should look further into the expansion of the Minidoka Dam. He suggested possibly having a subcommittee meet with the Idaho Department of Water Resources and the Minidoka and Burley irrigation districts to see if there is a partnership that could be formed to pursue this expansion further. This is a long term solution to water problems, but, in his opinion, it is critical that something be done. Since Minidoka Dam has to be rehabilitated, it would seem cost effective to at least investigate the impacts of raising that Dam.

Senator Cameron noted that it is going to take a lot of work to find a solution to the water rights Idaho Power is protecting versus the needs for that same water in other districts. He stated that a group needs to be meeting with Idaho Power to discuss this issue.

Representative Stevenson commented that the state has never before shown interest in raising Minidoka Dam. He suggested that the committee go on record in support of that raising or at least in support of a study to see if it would be feasible.

Representative Barraclough stated that, in his opinion, the Eastern Snake Plain Aquifer Working Group needs to discuss the factors of recharge, the timing of recharge, the pressure effect and so on. This information is available and a workshop on how everything interrelates with recharge would be helpful. He would also like to see verification that the models are accurate.

Representative Nielsen said that after attending both the Eastern Snake Plain Aquifer Working Group and the Mountain Home Working Group meetings he believes that in regard to the North Side Canal that comes out on the north side of Milner Dam (on private property), the group should work quickly to reach an agreement with the winter storage rights that Palisades has so that they can return flow to the canal to help solve the Thousands Springs problem. The state needs to solve this problem as soon as possible. The infrastructure is in place to do this.

Mr. Bert Bowler, Idaho Rivers United, suggested that the committee have a presentation on global climate change. He said that the Idaho Department of Water Resources is working with the University of Washington on this issue and that the committee could possibly get a report from experts on this issue. **Senator Noh** responded that the committee cochairmen did receive a letter from the climate group offering to speak to the committee.

Mr. Lynn Tominaga, Idaho Ground Water Appropriators, suggested that the

committee form working groups to discuss the issues of water supply, conservation and management of water. **Senator Noh and Representative Raybould** said they have been discussing this with Clive Strong and Director Karl Dreher and will probably be asking for volunteers to form these working groups. **Mr. Tominaga** said that his group would be able to provide technical information to these groups as well as present information to the main committee.

Representative Raybould commented that in his opinion the meetings have been very productive so far. They have gathered a lot of information and asked a lot of questions. Unfortunately, no answers have been found. He is hopeful that in the near future, from the information gathered, solutions will be found. This is what he thinks is the charge of the committee. He agreed with **Mr. Tominaga's** suggestion of additional working groups to deal with these other issues.

Mr. Jim Yost, Office of the Governor, said that according to the agreement the executive branch will put \$300,000 into conversion projects by July 1, 2004. This has already been accomplished and contracts for about \$500,000 worth of conversion projects are in place to date. Contracts for the entire \$800,000 will probably be in place by July 1, 2004.

Mr. Yost continued that the Governor has asked **Director Dreher** to meet with the Water Resource Board about the Minidoka Dam expansion to see what would be necessary for them to be a participant in that expansion. He has not received a report on the outcome of those discussions. In response to a question from **Representative Raybould**, **Mr. Yost** said that he believed that the Water Resource Board would be the appropriate state agency to approach the federal agencies and to coordinate the work on Minidoka Dam due to the fact that the Board has bonding ability. He said he would follow up on this at the next meeting.

Representative Wood said that the Eastern Snake Plain Aquifer Working Group spoke about a letter being sent to our congressional delegation regarding drought relief funds that might be available. It was also discussed that the Governor's office might also contact Congress about these funds. **Mr. Yost** said that state signed drought declarations for Lemhi and Custer counties recently. These declarations include applications from the counties for drought relief.

Mr. Strong, in response to **Representative Wood's** question, said that in a meeting with the congressional delegation and the spring users regarding drought relief, they were advised a letter was not needed immediately. Instead, draft legislation is being developed to allow access to drought relief funds for aquaculture. In a meeting with Senator Craig and Senator Crapo, congressional support for this was offered.

Representative Wood said that in her area there had been a request for funds to lower wells for both irrigation and domestic use. She asked if there has been a request from

the state to Congress for these funds and is there any chance funds would be given for this purpose. **Mr. Strong** said he was not familiar with the situation. **Mr. Yost** stated that he would investigate that and report back at the next meeting.

It was announced that John Johnson from the USDA Farm Service Agency would be willing to speak to the committee regarding the conservation reserve program.

Representative Raybould asked **Mr. Yost** to coordinate setting that up since such a request should come from the Governor's office.

The next meeting for the main committee was scheduled for June 3, 2004. Meeting dates for the working groups will be posted on the Idaho Department of Water Resources website as soon as they are available.

The meeting was adjourned at 3:00 p.m.

GRAPH "A"

Projects - Canals and Ownership		
Project	Recharge Canal	Ownership
Thousand Springs (Mile Post 31)	North Side Milner Gooding	Private United States
Lake Walcott	New (pump from Walcott)	United States
Hells Half Acres	Peoples Aberdeen-Springfield New Lavaside New Sweden	Private Private Private Private
Egin Lakes	Last Chance St. Anthony	Private Private

Note: Data from Idaho Department of Water Resources
Report: Feasibility of Large-Scale Managed Recharge of the
Eastern Snake Plain Aquifer System, December 1999

RECLAMATION

GRAPH “B”

Projects – Period of Recharge

Project	Period of Recharge
Thousand Springs (Mile Post 31)	January, February, March
Lake Walcott	January, February, March
Hells Half Acres	January, February, March
Egin Lakes	9 months; none in July, August, September

*Note: Data from Idaho Department of Water Resources
Report: Feasibility of Large-Scale Managed Recharge of the
Eastern Snake Plain Aquifer System, December 1999*

RECLAMATION

GRAPH "C"

Projects – Potential Volumes & Costs

Project	Potential Acre-Feet	Annual Cost
Thousand Springs (Mile Post 31)	648,000	\$3,670,500
Lake Walcott	176,000	\$1,074,500
Hells Half Acres	334,000	\$1,943,500
Egin Lakes	201,000	\$1,212,000
Total	1,359,000	\$7,900,500

Notes:

- Water data from Idaho Department of Water Resources Report: *Feasibility of Large-Scale Managed Recharge of the Eastern Snake Plain Aquifer System*, December 1999
- Cost data from 2/18/2004 draft report *Proposal for Implementing Large-Scale Managed Recharge on the Eastern Snake River Plain*, prepared for Discussion by the Middle Snake Regional Water Resources Commission
- Annual Cost assumes 50% of water comes from reservoir storage, 50% comes from natural flows. If all water recharged came from reservoir storage, total cost would be \$9,228,000. If all water recharged came from natural flows (none from reservoir storage), total cost would be \$4,503,000

RECLAMATION